Sub I1 concl'd

removing a peripheral portion of said expanded laser beam through a mask to form a masked laser beam, said peripheral portion including at least edges of said expanded laser beam extending in said first direction; and

A1 concl'd

condensing said masked laser beam in a second direction orthogonal to said first direction after removing said peripheral portion so as to decrease a second cross-sectional dimension of said masked laser beam to form a condensed laser beam, said second cross-sectional dimension being orthogonal to said first cross-sectional dimension and said condensed laser beam having a line-shaped transverse cross-section at the object.

Sub I2

6. (Twice Amended) A method for treating an object with a laser comprising the steps of:

A2

emitting a rectangular-shaped laser beam from the laser;

expanding said laser beam in a first direction so as to increase a first cross-sectional dimension of said laser beam to form an expanded laser beam;

removing a peripheral portion of said expanded laser beam through a mask to form a masked laser beam, said peripheral portion including at least edges of said expanded laser beam extending in said first direction; and

condensing said masked laser beam in a second direction orthogonal to said first direction after removing said peripheral portion so as to decrease a second cross-sectional dimension of said masked laser beam to form a condensed laser beam, said second cross-sectional dimension being orthogonal to said first cross-sectional dimension and said condensed laser beam having a line-shaped transverse cross-section at the object.

Sub I4

11. (Twice Amended) A method for treating an object with a laser comprising the steps of:

A3

emitting a laser beam from the laser;

expanding said laser beam in a first direction so as to increase a first cross-sectional dimension of said laser beam to form an expanded laser beam;

removing a peripheral portion of said expanded laser beam through a mask to form a masked laser beam, said peripheral portion including at least edges of said expanded laser beam extending in said first direction;

Sub I4 (1) cont'd

A13 (1) cont'd

condensing said masked laser beam in a second direction orthogonal to said first direction so as to decrease a second cross-sectional dimension of said masked laser beam to form a condensed laser beam, said second cross-sectional dimension being orthogonal to said first cross-sectional dimension and said condensed laser beam having a line-shaped transverse cross-section at the object; and

changing the relative location of said object with respect to said laser beam so that said object is scanned with said laser beam.

Please add new claims 17-109 as follows:

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--17. A method comprising the steps of:

forming an ion blocking film over a substrate;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam.

18. The method according to claim 1 wherein said laser beam is an excimer laser beam.

19. The method according to claim 1 wherein said ion blocking film comprises silicon oxide.

20. The method according to claim 1 wherein said ion blocking film comprises silicon nitride.

21. The method according to claim 1 wherein said film formed over the ion blocking film comprises a transparent conductive oxide.

22. The method according to claim 1 wherein said ion blocking film is not doped with phosphorous.

23. A method comprising the steps of:

forming an ion blocking film over a glass substrate containing alkali ions;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam.

24. The method according to claim 23 wherein said laser beam is an excimer laser beam.

25. The method according to claim 23 wherein said ion blocking film comprises silicon oxide.

26. The method according to claim 23 wherein said ion blocking film comprises silicon nitride.

27. A method comprising the steps of:

forming an ion blocking film over a substrate wherein said ion blocking film has a thickness within a range of 50 to 1500 Å;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam.

28. The method according to claim 27 wherein said laser beam is an excimer laser beam.

29. The method according to claim 27 wherein said ion blocking film comprises silicon oxide.

30. The method according to claim 27 wherein said ion blocking film comprises silicon nitride.

31. A method comprising the steps of:

forming an ion blocking film over a glass substrate containing alkali ions wherein said ion blocking film has a thickness within a range of 50 to 1500 Å;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam.

32. The method according to claim 27 wherein said laser beam is an excimer laser beam.

33. The method according to claim 27 wherein said ion blocking film comprises silicon oxide.

34. The method according to claim 27 wherein said ion blocking film comprises silicon nitride.

35. A method comprising the steps of:

forming an ion blocking film over a substrate;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam,

wherein said laser beam is a pulsed laser beam and has a wavelength not longer than 400 nm.

36. The method according to claim 35 wherein said laser beam is an excimer laser beam.

37. The method according to claim 35 wherein said ion blocking film comprises silicon oxide.

38. The method according to claim 35 wherein said ion blocking film comprises silicon nitride.

39. The method according to claim 35 wherein said film formed over the ion blocking film comprises a transparent conductive oxide.

A4 cont'd

40. The method according to claim 35 wherein said ion blocking film is not doped with phosphorous.

41. A method comprising the steps of:

forming an ion blocking film over a glass substrate containing alkali ions;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam,

wherein said laser beam is a pulsed laser beam and has a wavelength not longer than 400 nm.

42. The method according to claim 41 wherein said laser beam is an excimer laser beam.

43. The method according to claim 41 wherein said ion blocking film comprises silicon oxide.

44. The method according to claim 41 wherein said ion blocking film comprises silicon nitride.

45. A method comprising the steps of:

forming an ion blocking film over a substrate wherein said ion blocking film has a thickness within a range of 50 to 1500 Å;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam,

wherein said laser beam is a pulsed laser beam and has a wavelength not longer than 400 nm.

46. The method according to claim 45 wherein said laser beam is an excimer laser beam.

47. The method according to claim 45 wherein said ion blocking film comprises silicon oxide.

48. The method according to claim 45 wherein said ion blocking film comprises silicon nitride.

49. A method comprising the steps of:

forming an ion blocking film over a glass substrate containing alkali ions wherein said ion blocking film has a thickness within a range of 50 to 1500 Å;

forming a film over the ion blocking film;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction in order to irradiate a surface of the film formed over the ion blocking film with a condensed laser beam having a second cross section at said surface,

wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section; and

moving said substrate along a third direction orthogonal to said first direction so that the surface of the film formed over the ion blocking film is scanned with the condensed laser beam,

wherein said laser beam is a pulsed laser beam and has a wavelength not longer than 400 nm.

50. The method according to claim 49 wherein said laser beam is an excimer laser beam.

51. The method according to claim 49 wherein said ion blocking film comprises silicon oxide.

52. The method according to claim 49 wherein said ion blocking film comprises silicon nitride.

53. The method according to claim 17 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

54. The method according to claim 23 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

55. The method according to claim 27 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

56. The method according to claim 31 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

57. The method according to claim 35 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

58. The method according to claim 41 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the

expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

59. The method according to claim 45 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

60. The method according to claim 49 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

61. A method of manufacturing an active matrix display device having an active matrix circuit and a driving circuit, said method comprising:

forming an ion blocking film over a substrate;

forming a semiconductor layer comprising amorphous silicon over said ion blocking film to a thickness of 200 - 1500 Å;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction;

irradiating the semiconductor layer with the condensed laser beam having a second cross section at a surface of the semiconductor layer wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section;

moving said substrate along a third direction orthogonal to said first direction so that the semiconductor layer is scanned with the condensed laser beam and whereby the semiconductor layer is crystallized; and

forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors,

wherein both of the active matrix circuit and said driving circuit include said thin film transistors.

62. The method according to claim 61 wherein said laser beam is an excimer laser beam.

63. The method according to claim 61 wherein said ion blocking film comprises silicon oxide.

64. The method according to claim 61 wherein said blocking film comprises silicon nitride.

65. The method according to claim 61 wherein said ion blocking film comprises non-doped silicon oxide.

66. A method of manufacturing an active matrix display device having an active matrix circuit and a driving circuit, said method comprising:

A4 contd

forming an ion blocking film over a substrate to a thickness of 1000 - 4000 Å;

forming a semiconductor layer comprising amorphous silicon over said ion blocking film to a thickness of 200 - 1500 Å;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction;

irradiating the semiconductor layer with the condensed laser beam having a second cross section at a surface of the semiconductor layer wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section;

moving said substrate along a third direction orthogonal to said first direction so that the semiconductor layer is scanned with the condensed laser beam and whereby the semiconductor layer is crystallized; and

forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors,

wherein both of the active matrix circuit and said driving circuit include said thin film transistors.

67. The method according to claim 66 wherein said laser beam is an excimer laser beam.

68. The method according to claim 66 wherein said ion blocking film comprises silicon oxide.

69. The method according to claim 66 wherein said blocking film comprises silicon nitride.

A4 cont'd

70. The method according to claim 66 wherein said ion blocking film comprises non-doped silicon oxide.

71. A method of manufacturing an active matrix display device having an active matrix circuit and a driving circuit, said method comprising:

forming an ion blocking film over a substrate;

forming a semiconductor layer comprising amorphous silicon over said ion blocking film to a thickness of 200 - 1500 Å;

providing a first laser beam having a first cross section wherein said laser beam is a pulsed laser beam having a wavelength of not longer than 400 nm;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction;

irradiating the semiconductor layer with the condensed laser beam having a second cross section at a surface of the semiconductor layer wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section;

moving said substrate along a third direction orthogonal to said first direction so that the semiconductor layer is scanned with the condensed laser beam and whereby the semiconductor layer is crystallized; and

forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors,

wherein both of the active matrix circuit and said driving circuit include said thin film transistors.

72. The method according to claim 71 wherein said laser beam is an excimer laser beam.

73. The method according to claim 71 therein said ion blocking film comprises silicon oxide.

74. The method according to claim 71 wherein said blocking film comprises silicon nitride.

A4 cont'd

75. The method according to claim 71 wherein said ion blocking film comprises non-doped silicon oxide.

76. A method of manufacturing an active matrix display device having an active matrix circuit and a driving circuit, said method comprising:

forming an ion blocking film over a glass substrate containing alkali ions;

forming a semiconductor layer comprising amorphous silicon over said ion blocking film to a thickness of 200 - 1500 Å;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction;

irradiating the semiconductor layer with the condensed laser beam having a second cross section at a surface of the semiconductor layer wherein a length of said second cross

section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section;

moving said substrate along a third direction orthogonal to said first direction so that the semiconductor layer is scanned with the condensed laser beam and whereby the semiconductor layer is crystallized; and

forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors,

wherein both of the active matrix circuit and said driving circuit include said thin film transistors.

77. The method according to claim 76 wherein said laser beam is an excimer laser beam.

78. The method according to claim 76 wherein said ion blocking film comprises silicon oxide.

79. The method according to claim 76 wherein said blocking film comprises silicon nitride.

80. The method according to claim 76 wherein said ion blocking film comprises non-doped silicon oxide.

81. A method of manufacturing an active matrix display device having an active matrix circuit and a driving circuit, said method comprising:

forming an ion blocking film over a glass substrate containing alkali ions to a thickness of 1000 - 4000 Å;

forming a semiconductor layer comprising amorphous silicon over said ion blocking film to a thickness of 200 - 1500 Å;

providing a first laser beam having a first cross section;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction;

irradiating the semiconductor layer with the condensed laser beam having a second cross section at a surface of the semiconductor layer wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section;

moving said substrate along a third direction orthogonal to said first direction so that the semiconductor layer is scanned with the condensed laser beam and whereby the semiconductor layer is crystallized; and

forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors,

wherein both of the active matrix circuit and said driving circuit include said thin film transistors.

82. The method according to claim 81 wherein said laser beam is an excimer laser beam.

83. The method according to claim 81 wherein said ion blocking film comprises silicon oxide.

84. The method according to claim 81 wherein said blocking film comprises silicon nitride.

85. The method according to claim 81 wherein said ion blocking film comprises non-doped silicon oxide.

86. A method of manufacturing an active matrix display device having an active matrix circuit and a driving circuit, said method comprising:

forming an ion blocking film over a glass substrate containing alkali ions;

forming a semiconductor layer comprising amorphous silicon over said ion blocking film to a thickness of 200 - 1500 Å;

providing a first laser beam having a first cross section wherein said laser beam is a pulsed laser beam having a wavelength of not longer than 400 nm;

expanding said first cross section of the first pulsed laser beam in a first direction;

condensing the expanded laser beam in a second direction orthogonal to said first direction;

irradiating the semiconductor layer with the condensed laser beam having a second cross section at a surface of the semiconductor layer wherein a length of said second cross section in said first direction is longer than that of said first cross section and a width of said second cross section in said second direction is smaller than that of said first cross section;

moving said substrate along a third direction orthogonal to said first direction so that the semiconductor layer is scanned with the condensed laser beam and whereby the semiconductor layer is crystallized; and

forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors,

wherein both of the active matrix circuit and said driving circuit include said thin film transistors.

87. The method according to claim 86 wherein said laser beam is an excimer laser beam.

88. The method according to claim 86 wherein said ion blocking film comprises silicon oxide.

89. The method according to claim 86 wherein said blocking film comprises silicon nitride.

90. The method according to claim 86 wherein said ion blocking film comprises non-doped silicon oxide.

91. The method according to claim 61 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the

expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

92. The method according to claim 66 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

93. The method according to claim 71 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

94. The method according to claim 76 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

95. The method according to claim 81 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

96. The method according to claim 86 further comprising a step of removing a peripheral portion of the expanded laser beam through a mask before the step of condensing the expanded laser beam wherein said peripheral portion includes at least edges of the expanded laser beam extending in said first direction.

97. The method according to claim 23 wherein said glass substrate is a soda-lime glass.

98. The method according to claim 31 wherein said glass substrate is a soda-lime glass.

99. The method according to claim 41 wherein said glass substrate is a soda-lime glass.

100. The method according to claim 49 wherein said glass substrate is a soda-lime glass.

101. The method according to claim 76 wherein said glass substrate is a soda-lime glass.

102. The method according to claim 81 wherein said glass substrate is a soda-lime glass.

103. The method according to claim 86 wherein said glass substrate is a soda-lime glass.

A4 cont'd

104. The method according to claim 61 wherein said active matrix display device is a liquid crystal device.

105. The method according to claim 66 wherein said active matrix display device is a liquid crystal device.

106. The method according to claim 71 wherein said active matrix display device is a liquid crystal device.

107. The method according to claim 76 wherein said active matrix display device is a liquid crystal device.